

What is claimed is:

1. An optical glass comprising, given as molar percentages,  
28 to 50 percent of  $P_2O_5$ ;  
more than 20 percent but not more than 50 percent of BaO;  
1 to 20 percent MgO;  
a sum of  $Li_2O$ ,  $Na_2O$ , and  $K_2O$  exceeding 3 percent (with 0 to 25 percent of  $Li_2O$ , greater than or equal to 0 percent and less than 10 percent of  $Na_2O$ , and 0 to 12 percent of  $K_2O$ );  
more than 0 percent but not more than 15 percent of ZnO;  
0 to 25 percent of  $B_2O_3$ ;  
0 to 5 percent of  $Al_2O_3$ ;  
0 to 8 percent of  $Gd_2O_3$ ;  
0 to 20 percent of CaO;  
0 to 15 percent of SrO; and  
0 to 1 percent of  $Sb_2O_3$ ;  
with a sum of oxide contents of P, Ba, Mg, Li, Na, K, Zn, B, Al, Gd, Ca, Sr, and Sb being greater than or equal to 98 percent.
2. The optical glass according to claim 1, wherein the BaO content exceeds 42 weight percent; or the content of BaO is less than or equal to 42 weight percent and the weight ratio of  $P_2O_5$  to BaO ( $P_2O_5/BaO$ ) is less than 1.0.
3. The optical glass according to claim 1 or 2, wherein the ZnO content exceeds 1 weight percent; or the ZnO content is less than or equal to 1 weight percent and a sum of contents of  $Li_2O$ ,  $Na_2O$ , and  $K_2O$  exceeds 2 weight percent.
4. The optical glass according to claim 1, wherein a refractive index (nd) of from 1.55 to 1.72 and an Abbé number (vd) of from 57 to 70.

5. The optical glass according to claim 2, wherein a refractive index (nd) of from 1.55 to 1.72 and an Abbé number (vd) of from 57 to 70.
6. The optical glass according to claim 3, wherein a refractive index (nd) of from 1.55 to 1.72 and an Abbé number (vd) of from 57 to 70.
7. A press molding preform comprised of the optical glass according to claim 1.
8. A press molding preform comprised of the optical glass according to claim 2.
9. A press molding preform comprised of the optical glass according to claim 3.
10. A press molding preform comprised of the optical glass according to claim 4.
11. A press molding preform comprised of the optical glass according to claim 5.
12. A press molding preform comprised of the optical glass according to claim 6.
13. A method of manufacturing a press molding preform in which a glass melt gob of prescribed weight is separated from a glass melt flow, and a press molding preform comprised of the optical glass according to claim 1 is formed with the prescribed weight.
14. An optical element comprised of the optical glass of claim 1.
15. An optical element comprised of the optical glass of claim 2.
16. An optical element comprised of the optical glass of claim 3.
17. An optical element comprised of the optical glass of claim 4.

18. An optical element comprised of the optical glass of claim 5.
19. An optical element comprised of the optical glass of claim 6.
20. A method of manufacturing an optical element in which the press molding preform according to claim 7.
21. The method of manufacturing an optical preform according to claim 20, wherein the preform is introduced into a pressing mold, the pressing mold and preform are both heated, and the preform is precision press molded.
22. The method of manufacturing an optical element according to claim 20, wherein the pressing mold and preform are separately preheated and the preheated preform is introduced into the pressing mold and precision press molded.
23. A method of manufacturing an optical element in which the press molding preform manufactured by the method of manufacturing according to claim 13 is heated and precision press molded.
24. The method of manufacturing an optical preform according to claim 23, wherein the preform is introduced into a pressing mold, the pressing mold and preform are both heated, and the preform is precision press molded.
25. The method of manufacturing an optical element according to claim 23, wherein the pressing mold and preform are separately preheated and the preheated preform is introduced into the pressing mold and precision press molded.